DOCUMENT RESUME

ED 106 499 CE 003 665

AUTHOR	Steers, Richard M.
TITLE	Task Goal Attributes, n Achievement, and Supervisory Performance. Technical Report No. 30.
INSTITUTION	California Univ., Irvine. Graduate School of Administration.
SPONS AGENCY	Office of Naval Research, Washington, D.C. Personnel and Training Research Programs Office.
REPORT NO	TR-30
PUB DATE	Sep 74
NOTE	25p.
EDRS PRICE	MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS	Achievement; Achievement Gains; *Achievement Need; Data Analysis; Employer Employee Relationship; Feedback; Goal Orientation; *Individual Differences; *Management by Objectives; Motivation; Motivation Techniques; *Performance Factors; Sampling; *Supervisory Methods; Task Performance

ABSTRACT

A review of the research literature on goal-setting in organizational settings reveals that goal-setting on an individual job results in better task performance. However, the processes behind their effectiveness is unclear. For example, how are various job attributes of task goals related to performance, and how do various individual differences factors affect the goal-setting process? The study examines the impact of variations in individual differences on the task goal attribute and performance relationship. The investigation studies five task goal attributes: participation in goal-setting; feedback on goal effort; peer competition for goal attainment; goal difficulty; and goal specificity. One hundred thirty-three first-level supervisors in the accounting and customer service departments working under a goal-setting program were investigated through the use of a task goal attribute questionnaire, an adjective check list, a demographic information sheet, and performance measures. The results indicated that the need for achievement can represent a significant influence on the relationship between an employee's task goal attributes and performance. Participation in goal-setting was essential for low need achievers, while feedback and goal specificity were more important for high need achievers. A bibliography is provided. (JB)

ED106499

FEB 26 1975

TASK GOAL ATTRIBUTES, N ACHIEVEMENT, AND SUPERVISORY PERFORMANCE

RICHARD M. STEERS

Oakland University

Technical Report No. 30

September, 1974

INDIVIDUAL-ORGANIZATIONAL LINKAGES

Project Directors

Robert Dubin

Lyman W. Porter

University of California
Irvine, California 92664

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Prepared under ONR Contract N00014-69-A-0200-9001

NR Number 151-315

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CE003665

A version of this report

will appear in

Organizational Behavior and Human Performance

(1975, in press)

UNclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

FEB 26 1975

CE

ED106499

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Technical Report No. 30	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Task Goal Attributes, n Achievement, and Supervisory Performance		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Richard M. Steers		8. CONTRACT OR GRANT NUMBER(s) N00014-69-A-0200-9001
9. PERFORMING ORGANIZATION NAME AND ADDRESS Graduate School of Administration University of California, Irvine, CA 92664		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 151-315
11. CONTROLLING OFFICE NAME AND ADDRESS Personnel and Training Research Programs Office of Naval Research (Code 458) Arlington, VA 22217		12. REPORT DATE September 1974 13. NUMBER OF PAGES 20
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Goal Setting, Task Goal Attributes, n Achievement, Achievement Motivation, Performance.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This investigation analyzes the relationship between employees' task goals and supervisory performance as moderated by n Achievement among a sample of first-level supervisors working under a formalized goal-setting program. Before need strength levels were taken into account, little consistent relationship was found between the five task goal attributes and performance. After dividing the subjects into high and low n Ach groups, however, it was found that performance was significantly related to increases

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S/N 0102-014-6601 |

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CE003665

in feedback and in goal specificity for high n Ach subjects, and to participation in goal-setting for low n Ach subjects. Goal difficulty and peer competition were found to be unrelated to performance for both groups. These results are then compared to other studies on the topic and it is concluded that individual difference factors, like n Achievement, must be taken into account in any comprehensive theory of goal-setting in organizations.

Task Goal Attributes, n Achievement, and Supervisory Performance[1]

Richard M. Steers[2]

Oakland University

When the research literature on goal-setting in organizational settings is considered, strong evidence emerges that the act of setting clear goals on an individual's job generally results in better task performance than not setting such goals. These findings have been demonstrated in the laboratory (Bryan & Locke, 1967; Fryer, 1964; Mace, 1935) and in the field (French, Kay, & Meyer, 1966; Humble, 1970; Raia, 1965, 1966; Stedry & Kay, 1966). However, the simple knowledge that goal-setting techniques are relatively successful does not explain the processes behind their effectiveness. The available evidence on this latter point is far less clear. It appears that increased knowledge is required in at least two important areas. First, information is needed concerning the role played by the various components, or attributes, of an employee's task goals as they relate to performance on the job. Second, information is needed as to how various individual difference factors affect the entire goal-setting process. This study attempts to provide additional empirical knowledge relevant to both of these needs.

The present investigation studied perceptions of five factor-analytically derived "task goal attributes" as each related to supervisory performance. The five attributes are: (1) participation in goal-setting; (2) feedback on goal effort; (3) peer competition for goal attainment; (4) goal difficulty; and (5) goal specificity. Previous research (reviewed in Steers and Porter, 1974) identified these attributes as potentially having an important impact on resulting performance. Based on this earlier evidence, it was hypothesized that

four of the five attributes (participation, feedback, goal difficulty, and goal specificity) would be positively related to performance, while the fifth (peer competition) would be unrelated to performance.

The testing of these hypotheses should serve to enhance our existing knowledge as to which attributes generally tend to be related to performance. However, when we take a more complex view of goal-setting dynamics, it becomes apparent that a critical shortcoming in the vast majority of existing studies on goal-setting is their consistent failure to consider the impact of variations in individual differences (e.g., personality traits) on the task goal attribute-performance relationship. With few exceptions (e.g., Carroll & Tosi, 1970; French et al., 1966), it has been assumed without empirical evidence that such attributes affected all individuals in a similar fashion. It is argued here that an adequate knowledge of the role played by such individual differences is essential to an understanding of the intracacies of the goal-setting process as it relates to performance. Any theory of goal-setting must consider the role played by such individual differences if it is to explain in a comprehensive fashion why or how goal-setting works. In fact, the omission of such a consideration in previous research may explain many of the contradictory results found in the existing literature.

In an effort to overcome this shortcoming, consideration was given in the second part of the present study to the potential moderating effects of need for achievement on the task goal attribute-performance relationship. Need for achievement was felt to be a suitable individual difference factor for purposes of analysis here because of its previously demonstrated effects on work performance (Atkinson, 1958, 1964; Cummin, 1967; McClelland, Atkinson, Clark & Lowell, 1953). This second level of analysis will take a more exploratory, dialectic approach rather than testing specific hypotheses due

largely to the relative paucity of previous data on the topic.

Previous research on need for achievement as it relates to task goal attributes is almost entirely laboratory based. With respect to goal difficulty, several studies (carried out among students) have shown that high n Ach subjects perform better on tasks of moderate difficulty than on easy or very difficult tasks (Atkinson, 1958; Atkinson & Litwin, 1960; Mahone, 1960; Feather, 1961; Isaacson, 1965). This moderate difficulty point is theoretically where challenge is maximized.

Some tentative laboratory evidence has also indicated that both effort and performance are increased for high n Ach subjects when they are allowed considerable feedback on task performance; the same relation was not found for low n Ach subjects (Atkinson & Reitman, 1956; E. French, 1958a; Heckhausen, 1967; Horowitz, 1961; Wendt, 1955). Presumably, the low n Ach subject is less concerned with his or her level of performance and would not be strongly motivated by such feedback. We would therefore expect to find similar results in our own field investigation.

Persons who are high in n Ach are, under Murray's (1938) definition, desirous of assuming personal responsibility for the attainment of assigned goals. We might thus argue that such individuals would perform better when allowed a good deal of independence on a task. Some empirical work appears to support such an a priori description of the high n Ach subject (Horowitz, 1961; Pervin, 1970), while other studies clearly do not support it (Koenig, 1962; E. French, 1958b). On the other hand, we might expect that increased participation in group decisions concerning goals may serve as a catalyst to the low need achiever by providing group support and a feeling of ego-involvement in goal outcomes (Vroom, 1960).

Little empirical evidence is available to assist us in understanding the effects of peer competition on performance of high and low n Ach subjects. McClelland et al. (1953) defines n Ach behavior as directed toward competition with a standard of excellence, and Litwin and Stringer (1968) posit that a high degree of conflict and competition arouses n Ach drives. However, in the only empirical work found on the topic, Wendt (1955) concluded that external pressure to perform increased performance only for low n Ach subjects; no performance differences were found for high n Ach subjects working under varying degrees of competition.

Finally, no previous research has been found relating goal specificity to performance among high and low need achievers. However, an argument can be made that high n Ach subjects, who theoretically want performance measured against clear standards, would perform better when given clearly delineated goals. Conversely, low n Ach subjects may prefer not to be held accountable to such specific evaluation criteria.

METHOD

Research Setting and Sample

Because of the nature of the study, it was felt that a research site had to be found which employed a well-organized and highly legitimated goal-setting program. Only then could questions concerning the role of the task goal attributes be meaningfully interpreted by the subjects. While many organizations utilize some form of an MBO-type program, such programs are often poorly organized or do not have the legitimating support of higher management. The organization finally selected was a large west coast public utility. Based upon interviews with both upper and middle management, it was

concluded that this research setting reasonably met both the organizational and legitimation criteria sought.

Within this setting, the investigation was carried out among a sample of 133 female first-level supervisors in the Accounting and Customer Service departments. The mean age of the sample was between 40 and 44, while mean company tenure was between 15 and 19 years. Ninety-five percent had either a high school diploma or some college (but not a college degree).

Research Instruments

The questionnaire packet administered to subjects included the following three instruments:

Task Goal Attribute Questionnaire. This instrument (abbreviated TGAQ) represents an original questionnaire designed to elicit subject perceptions of their goal-setting environment. Specifically, it attempts to measure the extent to which respondents perceive the presence on the job of each of the five task goal attributes described above. The 23 items which comprise the questionnaire (see Steers, 1973) were developed from an *a priori* list of descriptive statements based on the existing literature which were believed to fairly accurately assess the presence or absence of the attributes on the job (e.g., "I really have little voice in the formulation of my work objectives."). Multiple items were used for each attribute. Subjects were asked to respond to the statements on seven-point Likert-type scales, ranging from "strongly agree" to "strongly disagree." Several items were negatively phrased and reverse scored in order to reduce response bias. Scores for each attribute were then calculated by taking the arithmetic mean of those items pertaining to the attribute.

Intercorrelations between items on the questionnaire were then factor analyzed using the principal axes method (Harman, 1967; Nunnally, 1967) with

Kaiser's (1958) varimax rotation in an effort to discover the underlying structure of the task goal attribute data (see Steers, 1973, for details). The decision rule used for inclusion of an item in defining a factor was a factor loading of .40 or above. The resulting solution yielded five relatively pure factors with low cross loadings. This solution explained 66.1% of the common variance. Scores on these five attribute factors were used in the final analyses.

Adjective Check List. Need for achievement was measured using Gough and Heilbrun's (1965) ACL. The ACL is a 300 item self-descriptive instrument which attempts to measure 23 personality traits (after Murray, 1938). Reasonable validity and reliability data exist in support of the use of this instrument (Gough, 1960; Gough & Heilbrun, 1965; Kleinmuntz, 1967). For example, n Ach measures on the ACL have been shown to be highly significantly related to Ac (achievement via conformance) measures on the California Psychological Inventory and to originality ratings on the Thematic Apperception Test. In addition, stability coefficients on n Ach measures for males and females using this instrument were found to be .81 and .74, respectively. Attempts were made in the instrument design to control for social desirability and acquiescence.

Demographic Data. In addition to the TGAQ and the ACL, demographic data were sought from the subjects on the following variables: (1) company tenure; (2) tenure on the present job; (3) age; and (4) education. Such information was collected primarily to study potential moderating effects on the major relationships under investigation.

Performance Measures. Independent measures were sought from the subjects' immediate superiors on two performance-related dimensions: goal effort (i.e., how hard the subject tried for goal attainment) and overall performance. Past experience with performance rating forms has consistently yielded highly skewed distributions (Campbell, Dunnette, Lawler & Weick, 1970). In an effort to over-

come this distribution problem, raters were asked to evaluate their subordinates on the two dimensions "as compared to their peers." Thus, while an absolute ranking was not possible in the study, such a ranking was approximated by forcing some spread into the distributions. This technique appears to have been successful and satisfactory distributions were achieved on both performance dimensions. Goal effort and overall performance measures were correlated at $r = .57$, thus sharing 32% of the common variance. Thus, while the two measures were related, as would be expected, they were still sufficiently distinct so as to tap two relatively autonomous and important dimensions of employee performance.

RESULTS

The data analysis proceeded on two levels. On the first level of analysis, subject scores for each of the five task goal attributes were correlated with the two performance measures for the total sample. On the second level of analysis, interest focused on the potential moderating effects that need for achievement might have on the task goal attribute-performance relationship. In this analysis, the sample was split at the median into high and low n Ach groups based on ACL need strength scores and correlational analyses were run separately for each group between task goal attributes and performance measures.

Before discussing these results, however, consideration should be given to the potential moderating effects of several of the more peripheral variables (e.g., demographic data) as they relate to the major study variables. As can be seen in Table 1, the demographic variables with one minor exception were not significantly related to either the task goal attribute or performance measures. Moreover, while the n Ach measure was significantly related to one

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Insert Table 1 About Here

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attribute and one performance measure initially, this significance disappeared when the subjects were split into high and low need strength groups for the second level of analysis. Such findings add strength to the obtained relationships discussed below by pointing to a general lack of association between these variables and the major study variables.

First Level of Analysis

The results of the initial analysis concerning the relation between each of the task goal attributes and the two performance dimensions are summarized in Table 2.

None of the five task goal attributes were found to be strongly or consistently related to the performance measures. Participation in goal-setting and goal specificity were each significantly related at the .05 level to one of the performance dimensions but not the other. The remaining three attributes

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Insert Table 2 About Here

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failed to even approach significance in relation to performance. Thus, the only hypothesis receiving clear support involved peer competition; as had been predicted, competitive effects were not significantly related to performance for this sample. The hypothesized positive relationships between participation and goal specificity with performance received only marginal support, while the hypothesized positive relationships between feedback and goal difficulty with performance were unsupported.

This problem of a lack of significant findings was compounded by the discovery that need for achievement was more strongly related to performance than were any of the five task goal attributes at this level of analysis. Thus, little support was obtained for the position taken by some that the presence of certain attributes on a job would be consistently associated with increased performance in organizational settings.

Second Level of Analysis

One of the major findings of the first level of analysis, then, was the general absence of significant relationships between the various attributes of an employee's task goals and performance. One possible explanation for this lack of association may lie in the failure of the above analysis to take into account the role played by individual differences. It has been argued throughout this study that variations in personality traits, like need for achievement, may represent a significant moderating force on the task goal attribute-performance relationship. This section presents the results relevant to this point (see Table 3).

Several interesting findings emerge from an analysis of these data. To begin with, participation in goal-setting was significantly related to both effort and performance for low need achievers and virtually unrelated for high need achievers. This finding has two important implications. First, it reinforces several laboratory findings which indicate that high need achievers tend to pursue their goals almost irrespective of the amount of involvement or independence allowed them (E. French, 1958b; Koenig, 1962). On the other hand, an argument can be made, based on these data, that increased participation

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may prove beneficial in terms of performance for low need achievers. While the data are not sufficient to demonstrate why such a relationship exists, a possible explanation may be that allowing low n Ach subjects to assist in the determination of their task goals may lead to increased ego-involvement in the task and a concomitant increased commitment to task accomplishment.

While participation appears to be an important consideration for low need achievers, feedback and goal specificity were found to be significant factors in performance for high need achievers. These two attributes were not significantly related to performance for low n Ach subjects. These data are consistent with the a priori definition of the high n Ach subject (see, e.g., Litwin & Stringer, 1968) and with some tentative laboratory findings on the topic (E. French, 1958a; Horowitz, 1961; Wendt, 1955). The present findings, combined with the earlier research, provide fairly strong support for the position that high need achievers perform better when assigned clear and highly specific goals and are then given ample feedback on their progress toward these goals. Such factors apparently have little impact on the low need achiever.

Finally, while no significant findings emerged for the attributes of peer competition and goal difficulty, certain trends did appear that are worthy of note. Peer competition, while showing no appreciable relation to performance for low n Ach subjects, was negatively (and almost significantly) related to performance for high n Ach subjects. While these results are certainly far from being strong, they are at least consistent with the position taken by McClelland et al. (1953) that when a high n Ach subject "competes with a standard of excellence," he is in reality competing against his own internal standards and not against any external group. A perception of external pressure to perform may indeed only serve to distract his attention away from his own self-energized goal-directed efforts, resulting in poorer

performance. Such an explanation can only be hypothesized here, however, as the data are not sufficiently strong to draw firm conclusions.

The relation between overall performance and goal difficulty is also worthy of note. While no significant relations were found here either, it is interesting that goal difficulty approached significance ($p < .08$) on the possitive side in its relation to overall performance for high need achievers and approached significance ($p < .06$) on the negative side for low need achievers. Such findings provide some support for the position taken by others that high n Ach subjects prefer more difficult goals to easy ones (up to a point) in the performance of their task requirements (Atkinson, 1958; Mahone, 1960; Feather, 1961). Moreover, while no previous relevant findings exist for purposes of comparison, these data also suggest that increasing the perceived difficulty of goals may have very adverse consequences in terms of performance for subjects rated low in need for achievement. Such a conslusion would be consistent with Birney's (1968) description of the low n Ach subject as one who attempts to avoid failure. The more difficult the goals, the greater the probability of such failure. However, as with the case of peer competition, such explanations must be considered speculative in nature due to the relatively low correlations behind them. They should provide stimulating areas for future investigation, however.

DISCUSSION

When taken together, the data from this study indicate that need for achievement can represent a significant influence on the relationship between an employee's task goal attributes and his or her performance. Before n Ach effects were examined, no consistent significant relations were found between any of the attributes and the two performance dimensions. It was only after

the sample was classified according to need strength that strong, consistent relations emerged. Goal specificity and feedback on goal effort were significantly related to performance for high need achievers, while participation in goal-setting was significantly related to performance for low need achievers. Goal difficulty and peer competition were not significantly related to performance for either need strength group. These findings are generally consistent with existing theory and research on achievement motivation.

The importance of such findings lies not in viewing these data in an isolated fashion, but rather in comparing the results with the data from similar studies in the area. In the present study, as in earlier studies using various needs (Carroll & Tosi, 1970; French et al., 1966; Vroom, 1960), need strength represented a significant intervening variable in determining performance. According to these findings, it appears that the important role of individual differences can no longer be overlooked or ignored in developing comprehensive models of goal-setting behavior. The data from these several studies strongly support the argument that various task attributes do not impact equally on all employees as they perform their jobs. Such a conclusion is consistent with the recent model proposed by Locke (1968; Locke, Cartledge & Knerr, 1970), in which personal aspiration level on a task is viewed as an important moderator of performance, and supports the arguments advanced in Steers and Porter (1974).

These findings have implications, not only for researchers, but also for practicing managers. According to these data, many managers may need to re-examine their simplistic notions of goal-setting programs, like MBO, and attempt to find suitable ways to account for personal variations within the framework of such programs. For example, the findings above seem to indicate that only certain types of employees perform better when given concrete feedback. It would

appear, then, that a greater awareness of the variations in one's subordinates, plus a capacity to vary or personalize program implementation techniques, would be prerequisite to the more effective use of goal-setting techniques in organizations.

FOOTNOTES

[1] This investigation was supported by funds supplied under Office of Naval Research Contract No. N00014-69-A-0200-9001, NR 151-315, and by a research grant from the Graduate Division, University of California, Irvine. The author wishes to express his appreciation to Lyman W. Porter, Daniel N. Braunstein, and Richard T. Mowday for their valuable comments on an earlier draft.

[2] Requests for reprints should be sent to Richard M. Steers, School of Economics and Management, Oakland University, Rochester, Michigan 48063.

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TABLE 1

Correlations Between Demographic and Need Strength Variables and Major Study Variables

Major Study Variables	Demographic and Need Strength Variables				
	Company Tenure	Job Tenure	Age	Education	n Ach
Task Goal Attributes					
Participation	-.07	-.29	-.06	.11	-.14
Feedback	-.05	.07	-.01	-.08	-.02
Competition	.16	.11	.14	-.08	.10
Difficulty	.01	.00	.03	-.09	.03
Specificity	.04	.12	.11	-.08	.26
Performance Criteria					
Goal Effort	-.16	-.04	-.08	.02	.32
Overall Performance	-.06	-.02	-.12	-.09	.15

N = 133

$p < .05 = .17$ (2-tailed test)

$p < .01 = .22$ (2-tailed test)

TABLE 2

Correlations Between Task Goal

Attribute and Performance Measures

Task Goal Attributes	Goal Effort	Overall Performance
Participation	.08	.20*
Feedback	.12	.13
Peer Competition	-.01	-.06
Goal Difficulty	.02	.02
Goal Specificity	.17*	.12

N = 133

* Significant at .05 level.

TABLE 3

Correlations Between Task Goal Attributes and Performance for High and Low n Ach Groups

Task Goal Attributes	High n Achievement		Low n Achievement	
	Goal Effort	Overall Performance	Goal Effort	Overall Performance
Participation	.06	.09	.21*	.41**
Feedback	.22*	.27*	-.02	-.04
Peer Competition	-.16	-.18	.04	-.00
Goal Difficulty	.02	.14	.02	-.19
Goal Specificity	.19*	.22*	.06	-.05

Note: Ns for high and low n Ach groups are, respectively, 69 and 64.

* Significant at .05 level.

** Significant at .01 level.